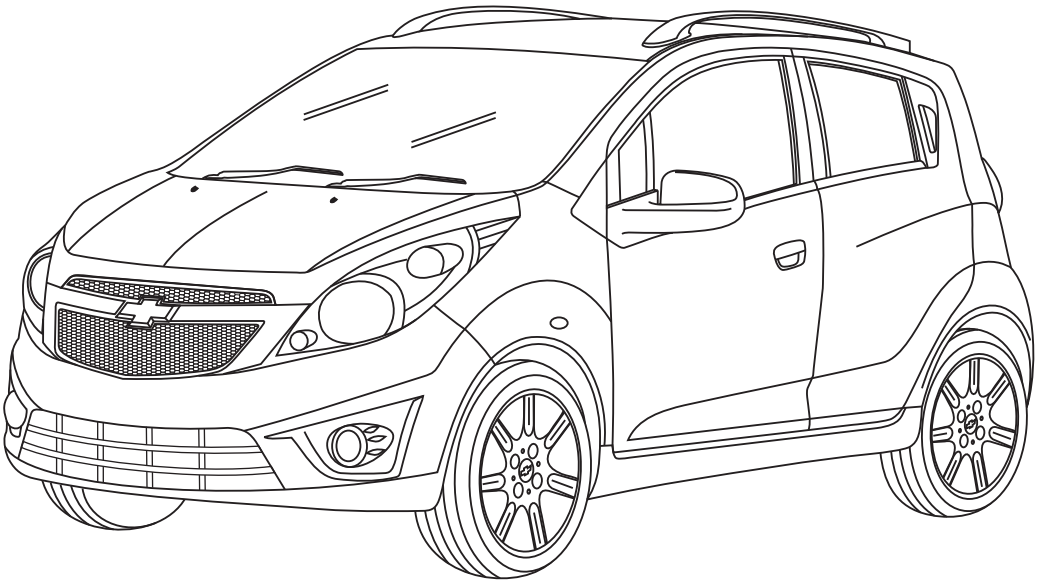
CHEVROLET

BEAT
LPG



Supplement Owner's Manual

Operation, Safety and Maintenance

VEHICLE RECORD SHEET

Model Name		Delivery Date		Tyre Make	
V.I.N.				Tyre Location	Batch Code
Engine No.		Key No.		Fr RH	
Registration No.		Regn. Date		Fr LH	
Transmission No.		Color, Code No.		Rr RH	
Battery Make		Battery Batchcode/Sl.No.		Rr LH	
Owner's Name				Spare	
Address					
City				Pin Code	
Selling Dealer's Name					
Address					
Pin Code				Selling Dealers Stamp	

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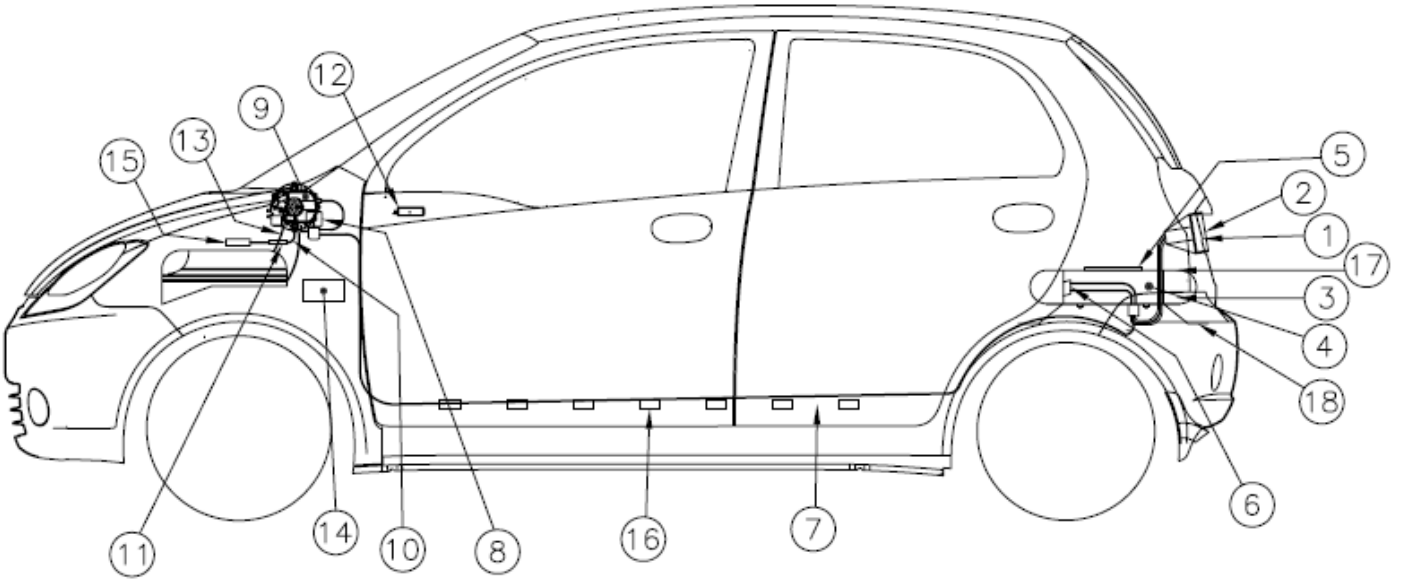
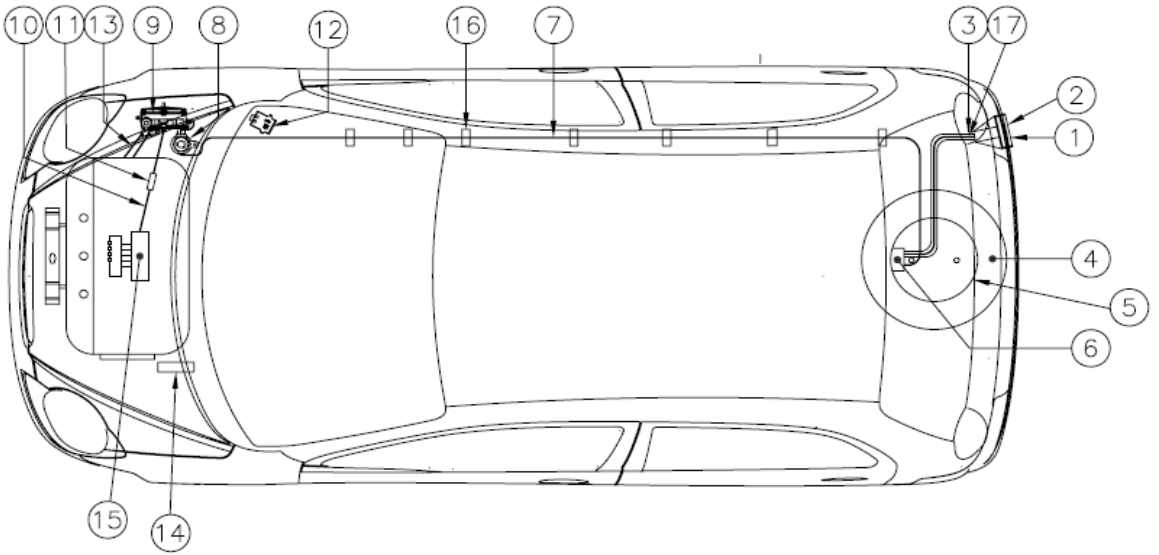
Layout of LPG System (Side View)



1. LPG Proof Case
2. LPG Filler Valve
3. HIGH Pressure Pipe PVC coated (8 mm)
4. LPG Tank
5. Tank Cover
6. Multivalve
7. High Pressure Pipe PVC coated (6 mm)
8. Gas Solenoid
9. Reducer
10. Low Pressure Hose
11. Gaseous Phase Filter
12. Change Over Switch
13. Coolant Hose
14. ECU
15. Injector & Injector Rail
16. Line Clamp-Screw
17. Ducting Hose
18. Earthing.

Layout of LPG System (Top View)



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15. Injector & Injector Rail
16. Line Clamp-Screw
17. Ducting Hose

Specification

SPARK	
Kerb Weight	**885 Kg**
Gross Weight	**1270 Kg**
Seating Capacity	**5 Person**
LPG Capacity (liters)	
(Tank Capacity)	**32.8 Liters**
(Filling Capacity) 80%	**26.20 Liters**

Note: Specifications are subject to change without notice

LPG Kit Identification	
Reducer No.	
Cylinder No.	
Retest Date.	
Multivalve No.	
ECU ID Number.	
Vehicle Details	
Engine No.	
Chassis No.	
Date of Sale.	

Note: To be filled in by the selling dealer

Introduction of LPG / Safety Precautions

Introduction to LPG:

Auto LPG is a clean, high octane and Eco-friendly fuel. It is basically a mixture of Butane and Propane and is obtained from Natural Gas by fractionation and Crude Oil Refining. LPG is in gaseous state at atmospheric pressure, but can be liquidated when moderate pressure is applied or when the temperature is sufficiently reduced. LPG produces less harmful exhaust gases as compared to petrol & diesel.

⚠ CAUTION

Always keep approx. 10-15 liters petrol in your petrol tank, as your vehicle will always start in PETROL mode. This will prevent gumming problem in your vehicle fuel system (fuel line, fuel pump, fuel injector etc.). It will also prevent rust from forming inside the petrol tank.

Safety Precautions

Do's:

- If any minor work or body repairs are to be carried out, turn the Multivalve knob to close position prior to commencement of the repair work.
- Get the LPG cylinder checked periodically as per the maintenance chart.
- If the engine does not start in LPG mode, switch over to petrol mode and take your vehicle to a Chevrolet authorized service outlet for inspection.
- It is always recommended to start the vehicle in Petrol mode.
- Ensure that conduit pipes are always in good condition and secured firmly. Replace in case damage is noticed

Don'ts:

- Never fiddle with any of the components in the LPG system.
- The cylinder should not be repaired under any circumstances. In case of any problem, consult with a Chevrolet authorized service outlet.
- Do not adjust setting of LPG system.
- Do not install domestic LPG or any other gas cylinder in place of OE fitted cylinder.
- Do not carry inflammable material near the LPG cylinder.
- Do not try to fill more than 26.20 liters of auto LPG.
- Do not use domestic LPG or any other gas in your vehicle.

⚠ CAUTION

After washing/cleaning please ensure that the LPG tank compartment is completely dry, before starting your vehicle.

Safety

In Case of Gas Leakage:

- Do not panic.
- The ECU automatically switches-off the LPG supply from the tank.
- As a safety precaution, close the manual shut - off valve provided on the 'Multifunction valve' located on the LPG tank. Ensure that the tank cover is properly fitted.
- Roll down all the windows and keep the doors fully open.
- The ECU will automatically switch the fuel mode to Petrol.
- The ECU will not allow you to switch to LPG mode until the leakage is rectified.
- Contact the nearest Chevrolet Authorized service station and get car repaired.

Fire Extinguisher:

One fire extinguisher is located below the front passenger seat.

Method of operation:

1. Check that the pressure gauge needle is in green zone.
2. Hold upright and pull the pin.
3. Press the lever.
4. Direct discharge at base of flame with rapid sweeping motion.
5. Recharge the fire extinguisher after use.

Maintenance

Check pressure on the gauge every week. The needle should remain in green zone. If it comes to red zone, please send the unit for recharging. **The Fire Extinguisher is to be refilled every three years even if it is not used.**

Brief Description of LPG System

The brief description of sequential injection system is as under:

Sequential Injection System can assure higher performances without compromising the simplicity of the installation.

From the functional & performance point of view Sequent Injection System has the following advantages:

- Reduced power loss
- No gas air mixer
- Very small reducer
- No backfire risk
- Reduced pollution levels

Sequential Injection is obtained by using an electronic injector in each cylinder. A high precision of gas dosage is obtained using this system.

Auto-Diagnosis on ECU inlet/outlet is protected against short circuit.

Spark LPG Vehicle comes fitted with bi-fuel option and can be driven on auto LPG or Petrol. An auto LPG storage tank has been installed in the trunk compartment and can store up to a maximum of 26.20 Liters of auto LPG.

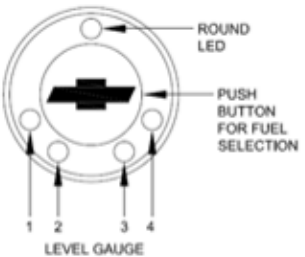
An auto LPG manual shut off valve is available on the multivalve in the LPG cylinder, in case gas supply to the engine needs to be cut off.

A selection switch is provided on the HLD Switch. This switch helps in selecting the fuel mode for the vehicle.

Fuel selection switch also indicates the amount of LPG in the storage tank. A separate indicator is also provided on the tank itself. In case, the gas is completely exhausted, the vehicle will switch over to petrol mode automatically without stopping. Fuel mode can be changed without stopping the vehicle.

Fuel Selection switch

Changeover switch



Selection of Fuel is done through the change over switch. You can select either LPG as fuel or petrol.

> ⚠ CAUTION
>
> Forced Starting in LPG mode can be used for only 5 times. After that user take his vehicle to a Chevrolet authorized service outlet to extend this mode for another 5 times.

> ⚠ CAUTION
>
> Please ensure that the gear shift is in Neutral position before starting the engine in either mode.

Forced Petrol Mode

When the push button is pressed on the switch, vehicle runs on petrol and the round LED on top glows **RED"** and all four levels LED turn off.

Forced start in LPG MODE (Not recommended)

If there is no petrol available in your petrol tank while starting, you may start your vehicle in LPG mode. To start your vehicle in LPG mode, please follow these directions:

- Turn on your Ignition Key.
- Your fuel mode indicator on your fuel selection switch glows red indicating petrol mode.
- Press and hold fuel selection switch for 5 seconds until fuel mode LED changes to green.
- Now crank your engine by turning your ignition key and your vehicle will start in LPG mode.

LPG Mode

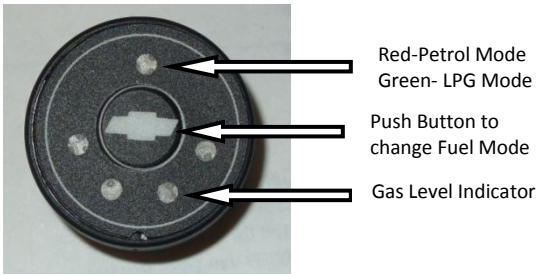
When the switch is in LPG mode the top LED is RED and the level gauge LED's glow indicating the level of LPG in the tank. If this condition is not present then press the switch.

As your vehicle always starts in petrol mode the LED on top glows red. The vehicle automatically changes over to LPG from petrol after reaching the following conditions:

1) In cold start, it waits for coolant temperature reach 55˚C.
2) If coolant temperature is between 55˚ C to 75˚ C then it waits for 60secs.
3) If coolant temp is more then 75˚ C it waits for 10sec.

Upon changing to LPG the LED on top changes to **GREEN** indicating that your vehicle is now running on LPG. Also the solenoid fitted on the LPG tank gets energized making a "TAK" sound. This is a normal and acceptable behavior.

Indications of LED and Beeper



The LED's on the fuel selection switch indicates the level of gas in the cylinder.
There are six different types of indications of LED: -

Sl. No	Quantity of LPG in tank (%)	LED indication on Fuel selection switch
1.	100% - 85%	4 LED's Blinking
2.	85%-65%	4 LED Glowing
3.	65%-45%	3 LED Glowing
4.	45%-25%	2 LED Glowing
5.	25%-5%	1 LED Glowing
6.	5%-0%	1 LED Blinking

Beeper indication

Your vehicle is also installed with a beeper which is fitted behind the Fuel selection switch. This beeper has two different sound patterns which indicate as follows:

1. Automatic return to petrol when your LPG is over

When the auto LPG in your LPG tank is over the fuel mode is automatically changed over to petrol. A buzzer will begin to beep every 1 second to indicate this automatic changeover to petrol mode. The driver needs to acknowledge this by pressing your fuel selection switch and the buzzer will stop beeping.

2. Diagnostic errors

Whenever there is a diagnostic error your buzzer will make 3 beeps every 20 seconds. At this point please press the fuel selection switch to change over to petrol mode. **Please get your vehicle inspected/repaired at nearest Chevrolet authorized service outlet.**

LPG Electrical Fuse

The LPG system is protected against short circuit / overload using 15A fuse fitted as shown in the figure. The changing of fuse should be done only at Chevrolet Authorized Outlet.

⚠ CAUTION

Always be sure to replace blown fuse with fuse of correct amperage. Never use a substitute such as aluminum foil or wire to replace a blown fuse. Have your vehicle inspected immediately by Chevrolet Authorized Service Outlet.

LPG Filler Valve / LPG Cylinder / LPG Multivalve

LPG Filler valve

Auto LPG Refueling valve is located at rear right side below tail lamp. Plastic cap on the Filler Valve should be closed completely after refueling. Filling is stopped automatically once the tank is filled up to 80% of the capacity. As a safety precaution partial filling should be avoided as far as possible. When filling an empty tank it is advisable to fill 26.20 liters of LPG in the tank of your vehicle. The tank fitted in your vehicle is of 32.8 liters.

LPG Cylinder

The LPG cylinder is installed in the luggage compartment. Regularly inspect for loosening of mounting bolts of Cylinder Mounting.

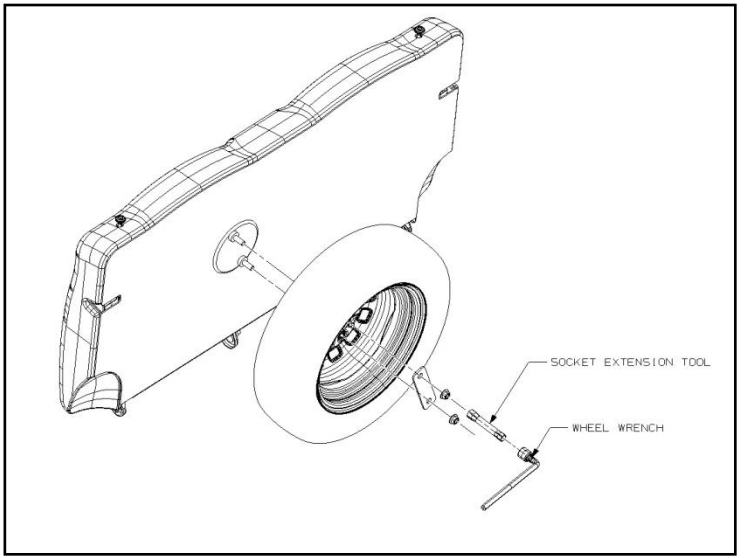
> ⚠ CAUTION
>
> Always shut-off the engine while refueling the Auto LPG in your vehicle.

LPG Multivalve

The Automatic Shut Off valve is located on the Multivalve of the Auto LPG Cylinder. Tank Cover should be placed always on the LPG tank to avoid gas entry into the compartment. The knobs of the Tank cover should be hand tightened completely.

Spare Wheel Assembly

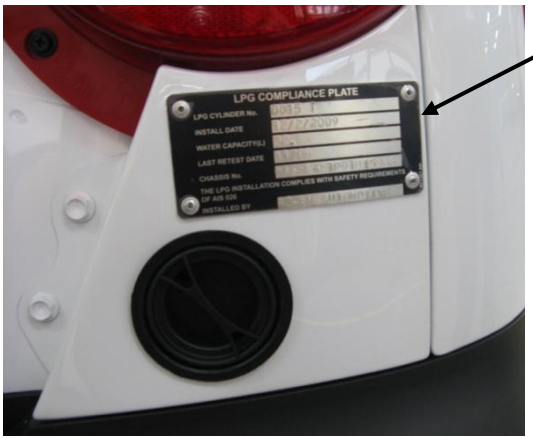
For your Spark LPG vehicle the Spare wheel is assembled to the back of your rear seat in the luggage compartment**.** In the tool kit you will find a socket extension tool along with your other regular tools. This extension tool needs to be attached to your wheel wrench when assembling or disassembling the spare wheel from your luggage compartment. The adjacent figure illustrates the spare wheel assembly operation.

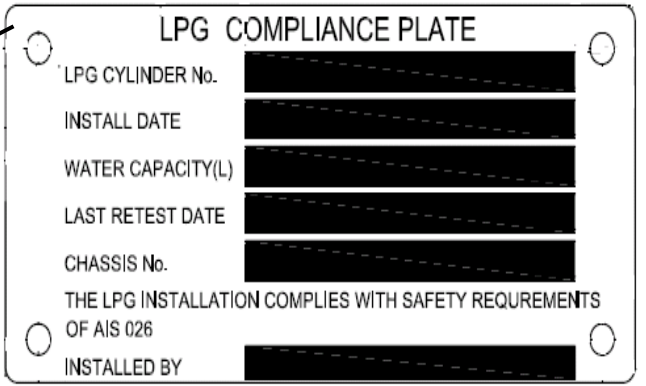


Compliance to Motor Vehicle rules

Your car's LPG tank needs to be recertified every five years as per CMVR (AIS 24, 25 and 26)

Please ensure that it is done by a Chevrolet Authorized Service Outlet and the new date is engraved on the plate.





Periodic Inspection & maintenance schedule

INSEPECTION POINT	Kilometer (miles) or time in months, whichever comes first																			
	6 months/5000	1 yr / 10000	1.5 yr / 15000	2 yr / 20000	2.5 yr / 25000	3 yr / 30000	3.5 yr / 35000	4 yr / 40000	4.5 yr / 45000	5 yr / 50000	5.5 yr / 55000	6 yr / 60000	6.5 yr / 65000	7 yr / 70000	7.5 yr / 75000	8 yr / 80000	8.5 yr /85000	9 yr/ 90000	9.5 yr / 95000	10 yr /100000
MOUNTING OF LPG TANK & KIT	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
LEAK CHECKING AT ALL POINTS	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
GASEOUS FILTER						R						R						R		
GAS SOLENOID FILTER			R			R			R			R			R			R		
REDUCER DIAPHRAM OVERHAULING KIT						R						R						R		
WIRING HARNESS CLAMPING	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
LPG TANK**	**REPLACE TANK AFTER EVERY 15 YEARS**																			

Note: * Statutory Test for Cylinder to be done as per IS-8869-1988

** Testing of LPG Cylinder is due after 5 Years from the date of Manufacturing, which is available in the Marking Plate on the Tank.

I: Inspect these items and their related parts. If necessary, correct, clean, replenish, adjust, rotate or replace.

R: Replace or change

Warranty Card

Rohan Automotive Equipments Pvt. Ltd. (RAEPL), a private limited company incorporated under the companies Act, 1956 and having its office at 5, Ashwamegh Industrial Estate, Changodar, Tal. Sanand, Dist. Ahmedabad – 382 213 warrants that the new LPG kit fitted on your vehicle is free from any material and/or workmanship defects, subject to your compliance with the terms and conditions mentioned hereunder and other kit maintenance norms as suggested in the service manual.

Under the warranty period only a Chevrolet authorized service outlet as mentioned in the Owner's Manual will carry out necessary repairs, using new, re-conditioned or re-manufactured parts with a view to correcting any defect covered by this warranty.

1. Warranty Terms:

   The LPG Kit fitted on your vehicle has a warranty of 3 years or 1, 00,000 Kms. whichever is earlier.

2. Warranty Obligation:

   Our obligation under this warranty shall be limited to repairing or replacing, free of charge, such parts of the LPG system which are found defective in our inspection, on the car being brought to Chevrolet authorized service outlet within the warranty period. The parts so repaired or replaced shall also be warranted for quality and workmanship till the vehicle warranty.

3. Warranty Limitation:

   3.1. Any part which is found to be defective and be replaced under the warranty shall become the property of GM India.

   3.2. Liability of GM India/RAEPL under the warranty is limited to the value of the service, repair/replacement of parts found to be defective within the warranty period.

   3.3. Free service will be provided to the kit during warranty period, only within the limits where GMI/RAEPL has its service network.

   3.4. Please visit your nearest Chevrolet authorized service outlet for all types of services for your car.

   3.5. This warranty shall be null and void if the car is subject to abnormal use, such as rallying, racing or participation in other competitive sports. This warranty shall not apply to any repair or replacements as a result of accident or collision.

3.6. This warranty is expressly in lieu of all warranties, whether by law or otherwise, express or implied and other obligations or liabilities on our part and we neither assume, nor authorize any person to assume on our behalf, any other liability arising from sale of the kit or any agreement in relation thereto.

3.7. Any claim arising from this warranty shall be recognized only if it is notified in writing to us without any delay soon after such defects as covered and ascertained under this warranty.

3.8. The decision taken by GM India/RAEPL will be final and binding on all matters arising out of the new kit Warranty.

3.9. The owner should preserve with them the original Invoice for the necessary verification and produce the same as and when required.

3.10. This warranty is issued at Changodar, Tal. Sanand, Dist. Ahmedabad, Gujarat and competent court shall have exclusive Jurisdiction of courts of Ahmedabad alone to the exclusion of all other courts.

3.11. Warranty shall be null or void if any vehicle on which parts or accessories not approved by RAEPL has been used, any vehicle which has been adjusted/repaired by other than a GMI/RAEPL Dealer or Service Engineer, Installation or usage of domestic LPG or LPG Cylinder.

3.12. Failure to have regular periodic inspection and service of the kit, Improper or wrong maintenance and in deviation with the guidelines given in service booklets, any modification, alteration made in the Vehicle, thereby affecting the functioning of the kit fitted on the vehicle.

3.13. Failure to use genuine parts, fluids (oil, coolant, Auto LPG) and or other accessories, consumables, recommended or approved by GMI/RAEPL. Damage caused by driving the vehicle under severe conditions such as un-pliable or water-logged roads, in race or rallies. Damaged caused by natural disasters like earthquake, floods, fire, etc.

3.14. Damage due to water or other foreign matters in the fuel system and /or illegal use of domestic LPG, damage to the kit while driving the vehicle in water logged conditions or entry of water into the kit fitment area.

3.15. No warranty repair shall be made if it is found that the vehicle identification number like chassis, engine, Odometer, LPG Reducer, LPG fuel tank, Multifunction valve, LPG ID plate, or the warranty and service booklet, have been tampered with.

4. Warranty responsibilities of the owner:

4.1. Use the LPG system as per instructions provided in the manual.

4.2. Ensure inspection of LPG system from time to time.

4.3. Keep the Warranty Card, Service Booklet of LPG system in safe place and present it to the GMI/RAEPL dealer during your regular maintenance visit and when repair work is needed.

4.4. Please get the vehicle information Card filled up and stamped by the selling GM India Dealer.

4.5. Present the Warranty and Service Booklet to have your vehicle inspected/repaired under warranty.

5. Disclaimer of consequential damage:

GMI/RAEPL assumes no responsibility for loss of vehicle, loss of time, inconvenience or any other indirect incidental or consequential damage resulting from the vehicle not been available to the owner because of any defect covered by this warranty.

6. Change of Ownership:

Change of ownership must be duly intimated to GMI dealer, if the vehicle is sold within warranty period.

Rohan Automotive Service Network

Sr. no	Zone	State	City/Town	Branch Address	Name of Dealer	Dealer's Address	Contact Person	Contact No.
1	East	WEST BENGAL	Kolkata	Rohan Automotive Equipments Pvt. Ltd.,EN61, Sector – 5,Salte Lake, Kolkata – 91			Mr. Somen Duta	Mob: 9830210421
2	North	DELHI	Delhi	Rohan Automotive Equipments Pvt. Ltd., 127, DDA Sheds, Okhla Industrial Area, Phase – I, New Delhi			Mr. Raju Singh	Mob: 9868850081
3	North	PUNJAB	Ludhiana		M/s. Prince Motors	Agar Nagar Road, Firozepur Road, Opp. Toor Restaurant, Ludhiana	Mr. Taranjitsingh	Mob: 9815020203
4	North	U. P.	Kanpur		M/s. The Next Generation	122/735. Shastri Nagar, Chain Factory Compound, Kanpur	Mr. Sumit Khanna	Mob: 9918801053
5	North	RAJASTHAN	Bhilwara	Rohan Automotive Equipments Pvt. Ltd., Opp. Ashoka Hotel, Sabun Marg, Bhilwara – 311 011			Mr. Parivesh Dad	Mob: 9829047894

6	South	TAMILNADU	Chennai	Rohan Automotive Equipments Pvt. Ltd., No. 11,R.O.B Main Road,Nr.TVS Petrol Bunk, Whites Road, Royapetta, Chennai – 600 014			Mr. Rakesh Shah	Mob: 9884028186
7	South	A. P.	Secunderabad	Rohan Automotive Equipments Pvt. Ltd., 4-7-1121/19/ 1&2 Putli bowli, Hyderabad – 95			Mr. .Mahesh Kotak	Mob: 9885019832
8	South	KERALA	Thrissur	Rohan Automotive Equipments Pvt. Ltd., 50/ 116 , Kanjany Road, Chungum, P.O – Ayyanthole, Thrissur – 03			Mr. Jose	Mob: 9846032927 9847033260
9	South	KARNATAKA	Bangalore	Rohan Automotive Equipments Pvt. Ltd., 131/3, Lalbagh Main Road, Banglore – 560 027			Mr. Ajayz Pasha	Mob: 9886098140
10	West	GOA	Bardez		M/s. Prithvi Auto Service	406/143 Nova cidade, near vista – dorio resort, Provorim, Bardez, Goa	Mr. Dilip Manwani	Mob: 9326101419
11	West	M. P.	Indore	Rohan Automotive Equipments Pvt. Ltd., 4/A, Victory Chambers, Ratlam Kothi, Nr. Gita Bhavan Square, A. B.			Mr. Ajay Mehta	Mob: 9826030899

12	West	MAHARASHTRA	Mumbai	Rohan Automotive Equipments			Mr. Kaushik	Mob:

				Pvt. Ltd., 151, Brick Factory Compound, Opp. Dreamland Bungalows, Shastrinagar, Mulund (W), Mumbai – 400 052			Oza	9870041699
13	West	MAHARASHTRA	Pune	Rohan Automotive Equipments Pvt. Ltd., 7, Parvati Industrial Estate, Opp. Adinath Society, Pune-Satara Road, Pune – 411 009			Mr. Parag Shah	Mob: 9822064101
14	West	GUJARAT	Ahmedabad	Parvatinagar, 3/A, Shyamal Row Houses, Satellite Road, Ahmedabad – 380 015			Mr. Hemal Shah	Mob: 9879788280

Rohan Automotive Head office

5, Ashwamegh Industrial Estate,
Changodar,Taluka- Sanand
Dist - Ahmedabad -382213
Ph- 02717 251900
www.rohanauto.com

General Motors India Pvt. Ltd.

All information, illustrations and specifications contained in this Owner's Manual are based on the latest production information available at the time of publication. The right is reserved to make changes at any time without notice.

Regd. Office : Chandrapura Industrial Estate, Halol - 389 351.
Dist. Panchmahals, Gujarat, India. Phone : 91 2676 221000
Customer Assistance Center : Plot No. 15, Echelon Institutional Area,
Sector 32, Gurgaon - 122 001, Haryana, India. Tel. : 91 124 3080000
Works : A-16, MIDC Talegaon Industrial Area (Phase-II),
Near Floriculture Park, Talegaon Navlakh Umbhre Village Road, Tehsi-Maval,
Pune - 410 507, Maharashtra, India. Tel: 91 2114 663939

24 Hr. Helpline at 30308080

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Notes